THE IMPACT OF FLOODPLAIN STUDIES AND FLOODPLAIN MANAGEMENT ON PRIVATE PROPERTY RIGHTS

by Carol E. Dinkins

INTRODUCTION

As the federal government uses its floodplain maps to implement floodplain land-use regulations, private interests are arming themselves with their own engineering studies to argue with the government about whether or not all Texas lands are subject to floods from rivers, floods from hurricanes, or floods from just rainfall. Because floodplain identification significantly affects property values, lawyers will be appealing the engineers' floodplain identifications. If the lawyers lose on those appeals, they may sue on the basis that map drawing by engineers for local community use in regulating construction and development constitutes a denial of private property rights.

EFFECTS OF FLOODPLAIN IDENTIFICATION

Floodplain mapping has had a considerable impact on local development. One of the most expensive results has been delay. As interest and carrying costs mount, landowners have waited to learn whether or not they could develop large tracts of land that were purchased just prior to the original National Flood Insurance Program of 1968.[1] If a property owner undertook development or construction within a floodplain located in a community that participated in the program, the construction was subject to federal land-use requirements implemented at the local level. Many landowners had acquired large tracts, expecting to begin development as soon as engineering and land-use plans had been completed. Then, on the last day of 1973, Congress and the President made the Flood Insurance Program mandatory; no federally regulated or insured financial aid was available for con-

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struction in the 100-year floodplain unless the borrower purchased federally subsidized flood insurance on the structures.[2] This in turn invoked the requirement that construction and development proceed only in accordance with federal land-use regulations enforced at the local level.[3]

The floodplain concept is new and has had unsettling effects on property owners who can no longer realize their original expectations. Many owners had acquired lands that they believed were not flood-prone, only to learn quickly that their property *was* considered flood-prone under the stringent federal standard, the 100-year flood (also called the 1%-chance flood).

Having made this discovery, landowners assessed the construction costs necessary to develop designated floodplain land and found two or three basic alternatives.[4] Property owners in fringe floodplain areas could bring their land above the level of the 100-year flood with area-wide fill. By seeking and receiving a letter of map amendment from the Federal Insurance Administration, they could then have the property removed from flood-prone designations. Other landowners with large tracts could request state approval for stream rectification or perimeter levee construction to protect their property. Again, a map amendment would be required. The most common means of floodplain construction, of course, is to raise the slabs of individual structures or to elevate them by pier and beam construction. Nonresidential structures can be flood proofed and still comply with the program. A final category of landowners includes those who discovered that their property lay within a designated floodway area. These people are the most seriously affected, since they cannot develop or construct on their property unless they are able to show that flood heights will not increase as a result of their encroachment into the floodway.

UNPREDICTABILITY OF IDENTIFICATION

Because identification of flood-prone land carries with it restrictive land-use requirements, many landowners sought to determine in advance what the 100-year floodplain would look like if mapped in accordance with FIA criteria. Other landowners, whose property was designated as subject to flood hazards, retained consultants who try to convince the FIA that its studies are inapplicable to their property. Either course of action requires that the consultant be thoroughly familiar with the FIA criteria for approving or disapproving the 100-year floodplain. A wide range of disagreements has appeared with regard to particular floodplain decisions.

To meet legal requirements, precise identification, not subjective decisions, must be used. Such elements as the development of a regional or station skew coefficient, the orientation of cross-sections across a floodplain, and the calculation of bounded frequency discharge curves using a *standard*

project or *probable maximum* flood[5] are necessary for resolving disputes between clients and government agencies. When the FIA mapped the 100-year floodplain in the Houston area, it was necessary to learn how the Corps of Engineers used FIA criteria in developing hydrology and hydraulics studies. Floodplain mapping uncertainties and the resulting land-use restrictions affect water resources management and floodplain information development. These uncertainties must be considered with respect to administrative appeal of floodplain decisions and, in particular, the judicial remedies available for a property owner forbidden to use his land as he wishes.

APPEAL

The two-level mapping procedure used by the Federal Insurance Administration triggers two different approaches to reviewing administrative action. The initial map, the Flood Hazard Boundary Map, can be appealed at the administrative level by a request, accompanied by technical data, for a letter of map amendment. Grounds for appeal include better topographic information, notice that the property has been filled, or a new floodplain study showing that the FIA hydrology or hydraulics study was done incorrectly. The second set of maps, the rate maps, is also subject to technical appeal, which is a much more formal administrative process, starting at the local level.[6]

If appeals fail, the property owner can seek redress through the federal courts under the provisions of the Federal Administrative Procedure Act.[7] Such an appeal would be based upon determining whether there is substantial evidence to support the Federal Insurance Administration's conclusions. Research has not revealed any appeal that has been prosecuted through the courts attacking the flood mapping conclusions of the FIA, but a court can be expected to examine the reasonableness of the FIA evaluation.

THE "TAKING" ISSUE

Exploration of all possible avenues of resolution at the administrative level is strongly recommended because the present case law, although it offers some comfort, does not indicate much certainty of relief. Most cases involving taking of land because of floodplain regulations arise in the state courts. Since these types of regulatory programs are imposed on a local level, rather than a federal level, the suits customarily have not been brought against the federal government. There are no Texas cases on floodplain zoning.

Land-use regulation is constitutionally limited. The fifth and fourteenth amendments to the United States Constitution and similar provisions in state constitutions forbid the taking of property without compensation.

The government can exercise its police power to further public safety, health, and welfare by restricting land uses, but it cannot restrict them so far as to deprive the owner of the beneficial use of his land. When the owner is deprived of all reasonable uses, the regulation is deemed to be confiscatory and in violation of the fifth and fourteenth amendments.

If a court decides a governmental action results in an unconstitutional taking of land, two types of relief are possible. The court may declare the statute invalid as applied to a particular tract of land, or the court may order the government to buy the tract in question under an inverse condemnation theory. In an inverse condemnation cause of action, the property owner institutes a suit for reimbursement, claiming that the government has in essence taken the land under its eminent domain power, and therefore must reimburse the owner for its value in accord with the fifth amendment. Case law indicates that a court may be limited by the circumstances of a particular case in granting a particular type of relief. In some cases the court may not compel reimbursement under an inverse condemnation theory unless the governmental agency involved in the suit has the power of eminent domain.[8]

Regulations cannot be enacted for the purpose of preserving land for the general public. In order to maintain private land in a natural state, the government must show that public interests are harmed by planned private use. This can be done by proving that proposed development would endanger the lives or property of others. In this way the regulations can become an exercise of police power.

In floodplain zoning cases, in particular, courts will uphold restrictions that reduce the value of lands, but they generally invalidate restrictions that deny all economic uses of lands. To find an economic use, courts may consider whether or not the lands are capable of earning a fair rate of return based upon the original price, the cost of improvements where development cannot be achieved in a natural state, and the taxes on the land. Normally, however, denial of a use is held not to be unreasonable when the land use may be hazardous to the landowner, occupants of his land, or purchasers. The courts are more likely to uphold the restriction if the regulation does not render an entire parcel unusable.[9] There has been no recent litigation, and none ever in Texas, on these issues. A court might strike down those floodplain regulations that deny use of private property on the Texas coast, because the coast, lacking canyons and valleys, does not experience the sudden high velocity floods that gravely endanger lives and property in other parts of the country. Hurricanes are certainly a threat, however, especially in lower-lying areas.

Few of the reported cases appear to consider any detailed or sophisticated hydrologic studies, but where presented, such technical information has benefited those plaintiffs injured by the floodplain regulations.

There is little in common among the ten or twelve individual cases on floodplains and taking of land. Several state courts have ruled specific floodplain regulations unconstitutional with regard to particular tracts; those floodplain regulations had permitted only uses that were not readily available to a private landowner for obtaining an economic return on his property.

One of the notable cases involving floodplain regulations is *Morris County Land Improvement Co. v. Zoning Board of Parsippany-Troy Hills*, 193 A.2d 232 (N.J. Sup. Ct. 1963). The New Jersey Supreme Court found that the zoning regulations were adopted for a public benefit—the preservation of open space as well as flood control in the lower reaches of the valley. Its ruling stated that the uses that might be permitted to the landowner were public or quasi-public in nature, and not such uses as would be readily available to the ordinary private landowner as a means of obtaining a return on the property. Although the measures adopted by Parsippany-Troy Township did not amount to a direct or outright taking, the town indirectly took the land through excessive regulation under the police power. When strict regulations prevent a private owner from exercising reasonable rights to his land, the court prefers public acquisition to regulation because inverse condemnation is at work.

Similar conclusions were drawn in *Dooley v. Town Plan & Zon. Com'n of Town of Fairfield*, 197 A.2d 770 (Conn. Sup. Ct. Errors 1964). The Connecticut court found that zoning regulations rendered use of the plaintiff's land impossible, which act, in effect, amounted to a practical confiscation of the land. The court held that exercise of eminent domain was a more appropriate action than regulation, since the public, but not the property owner, benefited directly from avoidance of floodplain development.

Another Connecticut court held that denying an owner permission to build the particular kind of structure he wanted was not an unconstitutional deprivation of a right to use property if the owner was permitted to build a different type of structure suited to the same use.[10]

Two cases involving wetlands zoning are of interest because the same general principles apply to floodplain zoning. In *Bartlett v. Zoning Commission of the Town of Old Lyme*, 282 A.2d 907 (Conn. Sup. Ct. 1971), the court studied whether the purpose of preserving marshlands from encroachment or destruction could be accomplished through zoning regulations. Citing *Dooley*, noted above, the court found that practical uses of the plaintiff's property were almost nonexistent. The court held that, in this particular complaint, the zoning regulation amendments were unreasonable, confiscatory, and unconstitutional.

In *MacGibbon v. Board of Appeals of Duxbury*, 255 N.E.2d 347 (Mass. Sup. J. Ct. 1970), the court held that preservation of privately

owned land in an unspoiled state for public enjoyment and benefit by preventing the owner from having any practical uses is not within the scope of any power delegated to the municipalities under the State Zoning Act. The town might lawfully accomplish its purpose only by acquiring the wetlands through gift, purchase, or eminent domain.

In *Sturdy Homes, Inc. v. Township of Redford*, 186 N.W.2d 43 (Mich. App. 1971), the court held that the floodplain ordinance was not unconstitutional *per se*, but as applied to this plaintiff, it unreasonably deprived him of any use of his property. Similar to this classic case, which found that application of the zoning ordinance to the particular property amounted to expropriation, was *A. H. Smith Sand & Gravel Company v. Department of Water Resources*, 313 A.2d 820 (Md. Ct. App. 1974). Again, the attack was not upon the validity of the legislation, but upon the application of the general statutory plan to the particular situation. Because the plaintiff had not yet applied for a variance permit, the court could not determine whether there had been a taking of land. The court, however, set forth the proper criteria for determining the floodplain. In determining the limits of the 50-year flood, an agency must establish floodplain encroachment limit lines based on existing, not future, conditions.

There are also cases that uphold the constitutionality of the statutes as well as the application of floodplain regulations, such as *Turnpike Realty Company v. Town of Dedham*, 284 N.E.2d 891 (Mass. Sup. J. Ct. 1972). The court noted that floodplain zoning protects those who develop or occupy the land in spite of the dangers, as well as other people in the community, by alleviation of their damages from flooding. In contrast with cases discussed above, the court found the plaintiff had not been deprived of all beneficial use of the property although it was "substantially restricted" in use of the land.

In *Turner v. County of Del Norte*, 101 Cal. Rptr. 93 (1st Dt. Ct. App. 1972), the court upheld floodplain zoning and showed clearly the need for such zoning. The plaintiffs in that case sued the county for inverse condemnation of their property, which was platted as a residential subdivision. The area had been flooded four times in a thirty-seven year period. During a 1964 flood, the main channel of the river flowed directly across the property in question, sweeping everything away and destroying an entire town four miles downstream from the subdivision. The court found evidence of a flooding frequency that would "almost certainly eventually destroy" permanent structures built on this land as well as endanger the lives and health of the occupants. The court also found that buildings in this floodplain would increase flood heights, increasing the hazard to other buildings downstream.

FLOOD CONTROL AND LIABILITY IN TEXAS FLOODPLAIN CASES

Another legal issue in floodplain designation is liability for damages resulting from alteration of a floodplain. When stream rectification, or channelization, and construction of levees are the means of alteration, the Texas Department of Water Resources exercises regulatory jurisdiction. The department must give prior approval to the construction and maintenance of "any levee or other such improvement on, along, or near any stream" that would control, regulate, or change the floodwater of the stream (Section 16.238 of the Texas Water Code).

Texas courts have repeatedly observed that no one rule can govern cases concerning the placement of levees or embankments along streams. The facts of each situation must be weighed to determine the rights of the parties.[11] The act, however, of causing water to leave a stream channel, including a flood channel, and inundate lands not previously flooded constitutes a direct trespass to such land. A landowner has no right to commit such an act without being held responsible at law for damage to the realty.

While a property owner is generally held liable under Texas Water Code Section 11.086 for actions injuring neighboring land, the consulting engineer is not liable under the statute, according to a recent Texas Supreme Court ruling. In *Kraft v. Langford*, 21 Tex. Sup. Ct. J. 302 (April 5, 1978), the court held that the engineer for a development was immune from suit for liability under the Water Code provision that prohibits damage of property of others by diverting surface waters. The engineer, however, who has been to the Texas Supreme Court twice in the past few years, may find his way back there on the same case because the court refused to rule that he was not liable under some common law theory or cause of action. The court also ruled that status as a professional engineer did not protect the defendant from either remedy as a matter of law.

SUMMARY

In concluding this nutshell course in floodplain law, I can make a number of suggestions. The property rights of landowners must be considered when evaluating flood hazards. In floodplain identification for any governmental agency, the concluding studies must comply with applicable guidelines and criteria to assure that floodplain management restrictions apply equally to everyone, for the resulting conclusions have tremendous effects on personal property rights. Standard, accepted means of calculating and defining the floodplain area should be used since more subjective measures have not been endorsed by the courts. Predictions and future problems will have to be dealt with as policy questions, as the courts look at present conditions in reaching their decisions.

Representatives of private interests who suffer from floodplain identification should be inquisitive about the criteria used in mapping. If the results appear inapplicable or inappropriate, they should raise questions and suggest alternative methods. If this fails, they could consider whether the issue is critical enough and clear enough to ensure that their clients may prevail in the courthouse, where remedies are few.

NOTES

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1. Pub. L. No. 90-448 (1968); 42 U.S.C.A. §§ 4001-4128 (1974).

2. The Flood Disaster Protection Act of 1973, Pub. L. No. 93-234 (1973). Because of strenuous objections to the mandatory provision, the law was amended on October 12, 1977, to remove federally insured financial institutions from the mandate requiring flood insurance as a condition of loans for structures located in floodplains. The amendments require the institutions to notify the borrower whether federal relief would be available in the event of a flood. In a community not participating in the program, a federally regulated or insured bank could grant loans, but federal disaster assistance for flooding would not be available. Pub. L. No. 95-128 (1977); 43 Fed. Reg. 7418-19 (Feb. 22, 1978).

3. 24 C.F.R. §§ 1909-1925 (1977).

4. 24 C.F.R. §§ 1910, 1917-18 (1977).

5. U.S. Water Resources Council, *Regulation of Flood Hazard Areas* **1** (1971): 343; U.S. Water Resources Council, Bull. No. 17 of the Hydrology Committee, *Guidelines for Determining Flood Flow Frequency* (Mar. 1976).

6. 42 U.S.C.A. § 4104 (1977); 24 C.F.R. § 1917-20.

7. 42 U.S.C.A. § 4104(f) (1977); 5 U.S.C.A. § 701 *et seq.*

8. See Carol E. Dinkins, "Governmental Land Use and Environmental Constraints to Consider in Planning New Projects," in *28th Oil & Gas Inst.* (Matthew Bender, 1977), pp. 195-197; also Gideon Kanner, "The Consequences of Taking Property by Regulation," *The Practical Lawyer* **24** (April 15, 1978): 65-77.

9. U.S. Water Resources Council, *Regulation of Flood Hazard Areas* **1** (1971): 380-382.

10. *Vartelas v. Water Resources Comm'n*, 153 A.2d 822 (Conn. Sup. Ct. Errors 1959).

11. *Jackson v. Knight*, 268 S.W. 773 (Tex. Civ. App.—Texarkana, 1925, *writ dism'd, w.o.j.*).